

From: [Dawson, Jeffrey](#)
To: [Leifer, Kerry](#); [Overstreet, Anne](#); [Echeverria, Marietta](#); [Reaves, Elissa](#); [Nguyen, Thuy](#); [Anderson, Neil](#); [Goodis, Michael](#)
Subject: FW: PFOS in pesticides
Date: Thursday, September 29, 2022 9:59:00 AM
Attachments: [Lasee 2022.pdf](#)

Hi all,

FYI

Jeff

Jeffrey L Dawson

Science Advisor

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From: Birchfield, Norman <Birchfield.Norman@epa.gov>

Sent: Thursday, September 29, 2022 9:52 AM

To: Dawson, Jeffrey <Dawson.Jeff@epa.gov>

Subject: FYI: PFOS in pesticides

Hey Jeff – I thought this might be related to the fluorine treatment of the bottles but it looks to me like there are PFAS in the inerts. NB

From: Gaines, Linda <Gaines.Linda@epa.gov>

Sent: Wednesday, September 28, 2022 4:14 PM

To: Birchfield, Norman <Birchfield.Norman@epa.gov>

Subject: FW: PFOS in pesticides

Linda G.T. Gaines, Ph.D., P.E., BCEE (*she/her*)

Environmental Engineer

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Phone: (202) 566-1054 (*note new number*)

From: Gaines, Linda

Sent: Wednesday, September 28, 2022 10:01 AM

To: Fitz-James, Schatzi <Fitz-James.Schatzi@epa.gov>; Strock, Troy <strock.troy@epa.gov>; Kirkland,

Kim <Kirkland.Kim@epa.gov>; Freed, Elisabeth <Freed.Elisabeth@epa.gov>; Baier-Anderson,

Caroline <Baier-Anderson.Caroline@epa.gov>; Cooke, Maryt <Cooke.Maryt@epa.gov>

Subject: PFOS in pesticides

A contact at BLM alerted me to this article.

<https://subscriber.politicopro.com/article/eenews/2022/09/27/high-levels-of-forever-chemical-found-in-pesticides-00059008?source=email>

The actual scientific article is open access

(<https://www.sciencedirect.com/science/article/pii/S266691102200020X?source=email>) but I'm also attaching here. This was targeted analysis, so I think there should be confidence in the results.

I believe the most appropriate response to the sentence in the article below "But the study revealed

levels ranging from 3.9 million to 19.2 million parts per trillion of PFOS in selected pesticides — much higher than the agency's threshold in drinking water." **Ex. 5 Deliberative Process**

Ex. 5 Deliberative Process

High levels of 'forever chemical' found in pesticides

New research showing elevated amounts of PFAS in widely used products is once again raising concerns as advocates push regulators to take action.

BY:

E.A. CRUNDEN

| 09/27/2022 01:29 PM EDT

A sign warns of pesticide spraying risks. jetsandzeppelins/Flickr

GREENWIRE | *This story was updated at 5 p.m. EDT.*

Furor over "forever chemicals" in pesticides is set to escalate with new research indicating the compounds contaminate widely used products that come into contact with food and pets.

Published in the *Journal of Hazardous Materials Letters*, [the new study](#) found PFAS in seven out of 10 insecticides scrutinized by scientists. Of those, six showed high levels of PFOS, which is slated for regulatory action in coming months and years. That legacy compound, which is no longer manufactured in the United States, is only safe at "near zero" levels in drinking water, according to recent interim health guidelines from EPA, which put the cutoff for PFOS at 20 parts per quadrillion. But the study revealed levels ranging from 3.9 million to 19.2 million parts per trillion of PFOS in selected pesticides — much higher than the agency's threshold in drinking water.

It also raises questions about broader threats to public health. One of the insecticides, malathion, [is broadly used](#) as an insecticide on a wide variety of food crops. Another, imidacloprid, is a major ingredient in some flea and tick collars worn by animals that come into close contact with people.

The findings have angered the group Public Employees for Environmental Responsibility, which has been active in testing pesticides for per- and polyfluoroalkyl substances. PEER Executive Director Tim Whitehouse [sent a letter](#) on Monday to EPA Administrator Michael Regan highlighting the study and calling for swift action.

"These findings strongly suggest that EPA's approach to preventing PFAS contamination of registered pesticides has been wholly inadequate," Whitehouse wrote. "In addition, EPA's reliance on voluntary testing appears to be profoundly misplaced."

The study, conducted by researchers at Texas Tech University, used targeted analysis for 24 PFAS on insecticide formulations that the Department of Agriculture uses on a crop research field. In addition to the PFOS findings, the researchers also noted several possible compounds outside of the 24.

They noted some caveats, including that they were testing very large amounts of the pesticides. "While the PFAS concentrations found in this study are a cause for concern, these insecticides are a highly concentrated product," the researchers wrote. But the study further entrenches the reality around just how ubiquitous PFAS have become and the sheer scope of the products they occupy. The findings show the

compounds being taken up into the roots of plants through contaminated soils, something the researchers observed in corn, beans and peanuts.

"Years of continuous use of PFAS and PFAS precursor-containing pesticides could lead to significant concentration of PFAS in the soil," they concluded. "Future use of soils treated with PFAS contaminated pesticides for other crops or pesticide drift could lead to PFAS concentrations being found in crops used for human or animal consumption."

PFOS contamination itself is a source of major worry. That compound, heavily linked to impacts like kidney and liver disease, cancer, and other deadly health issues, is being targeted by EPA under federal Superfund law, with drinking water regulations also in the works. But the research is also likely to raise more questions around the broader presence of PFAS in pesticides, further inflaming concerns that have been building for nearly two years.

PEER first detected PFAS in a common pesticide, Anvil 10+10, in December 2020, findings that were later confirmed by EPA ([Greenwire](#), March 5, 2021). Regulators traced that contamination to high-density polyethylene barrels used for transporting pesticides and warned that the product's manufacturers might be breaking the law through their fluorination practices ([Greenwire](#), March 16).

But advocates have remained suspicious of that link, asserting that the source of the contamination could also be inert ingredients — substances added to products but not revealed to the public. PEER's subsequent tests on the pesticide Permanone 30-30, for example, also revealed PFAS, but that product came packaged in metal containers ([Greenwire](#), March 26, 2021).

EPA has taken some steps to address those concerns. Earlier this month, EPA chemicals chief Michal Freedhoff announced that her office will seek to remove 12 PFAS from the agency's [approved list of inert ingredients](#), in a move "to better protect human health and the environment" ([Greenwire](#), Sept. 2). The agency said at the time that none of the chemicals being removed is in active use.

But PEER wants more from regulators. In his letter, Whitehouse asked EPA to take several actions, including requiring manufacturers to test and certify that their products are free of the chemicals and banning the use of PFAS in pesticides.

EPA should also remove "any statement that says or implies PFAS are no longer used in any registered pesticide product until testing is done," he said.

Whitehouse added that the study further underscores the importance of tackling PFAS as a class, rather than as individual chemicals or within subgroups. The presence of unknown PFAS in pesticides, he said, shows that the problem will require a much broader approach than EPA's current plan, which relies on testing within subgroups and no immediate steps toward class-based action.

Other components of the findings could also draw further fire. Imidacloprid, one of the pesticides found to contain PFOS, is already under immense scrutiny due to its presence in Seresto pet collars. Those products have been linked to a slew of animal deaths, as well as elevated exposure for people. Lawmakers are already pressuring EPA and the Food and Drug Administration to take those collars off the market, and internal agency communications show staffers have stark concerns about Seresto ([Greenwire](#), July 19).

EPA spokesperson Tim Carroll said via email that the agency "is committed to taking action to better understand and ultimately reduce the potential risks caused by PFAS." He added that EPA is "working on analyzing its list of pesticide active

ingredients to determine if any meet the current structural definition of PFAS or are part of other related chemistries that have been identified by stakeholders as being of concern."

Carroll additionally said that the agency plans to continue looking into the issue and taking action where appropriate.

Kyla Bennett, who directs science policy for PEER, said the findings "point to an appalling regulatory breakdown" within the agency. She expressed concerns about the possible scope of the contamination and the implications raised by the chemicals migrating into food.

"The level of absorption by plants suggests that a person could absorb a lifetime dose of PFAS from eating one salad made with produce treated with these pesticides," Bennett said.

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